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10/779,819

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EXAMINER

BIBBINS, LATANYA

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

10/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/779,819

Applicant(s)

KIM, HYUNG-KYOON

Examiner

LaTanya Bibbins

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. In the remarks filed on August 9, 2007, Applicant amended claims 1, 4, 5, 8-10, and 13, and submitted arguments for allowability of pending claims 1-13.

Response to Arguments

2. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.**

The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

In regard to claims 1, 4, 5, and 10, the specification simply refers to completing “data recording” and recording the “remaining data” (see paragraphs [0018] and [0031], and step 207 of Figure 2) and does not describe “recording a remainder of the data *other than formatting data*, after the erasing” as recited in amended claims claim 1, 4, 5, and 10. Therefore, claims 1, 4, 5, and 10 fail to comply with the written description requirement.

Dependent claims 2, 3, 6-9, 11, and 12, do not resolve the 35 U.S.C. 112 first paragraph issues of the independent claims recited above and are therefore rejected as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. ***Claims 1, 3-7, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (US Patent Number 7,114,028 B1) in view of Shishido (US Patent Number 6,876,615 B2).***

Regarding claim 1, Green discloses a method of recording data on an optical disc in an Incremental Recording mode in which data is partially recordable, the method comprising: determining whether the optical disc is formatted and recording data on the optical disc upon determining that the optical disc is not formatted (column 5 lines 25-33) and checking a state of the optical disc in a recording management area in which disc information is recorded (column 6 lines 1-4 and 42-44).

While Green discloses recording data on the optical disc upon determining that the optical disc is not formatted, as noted above, Green fails to specifically disclose, while Shishido does disclose “partially recording data other than formatting data on the optical disc upon

determining that the optical disc is not formatted (see the discussion in column 8 lines 23-67 and the discussion of the packet writing to the minimally blanked disc).

Green does not disclose, but Shishido does disclose erasing, after the checking of the state, data ranging from a next writable address to a predetermined block upon determining that the optical disc is a Minimal Blank disc in which data is erased from the recording management area to a lead-in area (column 2 lines 16-28 and 49-52 and Figure 8) and recording a remainder of the data other than formatting data after the erasing (see the discussion in column 8 lines 23-67 and the discussion of the packet writing to the minimally blanked disc).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the teachings of Green and partially record data other than formatting data, have data ranging from a next writable address to a predetermined block upon determining that the optical disc is a Minimal Blank disc in which data is erased from the recording management area to a lead-in area, and record a remainder of the data other than formatting data after the erasing as taught by Shishido. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to erase only the contents information of the track, erase the data recorded on the optical disc with a minimum time (Shishido column 8 line 19), and to properly record new data onto the track where the data has been pseudo erased (Shishido column 3 lines 19 and 20).

Regarding claim 3, Green does not explicitly disclose, but Shishido does disclose recording, after the checking of the state, data from a next address upon determining that the optical disc is a Minimal Blank disc in which data is erased from the recording management area to a lead-out area (column 2 lines 15-28 and 53-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the teachings of Green and have recording, after the checking of the state, data from a next address upon determining that the optical disc is a Minimal Blank disc in which data is erased from the recording management area to a lead-out area, as disclosed by Shishido. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to record data in a manner compatible with the minimally blank disk state.

Claim 4 is drawn to a computer readable medium corresponding to the method of using same as claimed in claims 1. Therefore computer readable medium claim 4 corresponds to method claim 1, and is rejected for the same reasons of obviousness as used above.

Regarding claim 5, Green discloses a method of recording data on an optical disc in an Incremental Recording mode, the method comprising: determining whether the optical disc is formatted (column 5 lines 25-33) and partially recording data to the optical disc at a desired position upon determining that the optical disc is not formatted (column 5 lines 25-33).

While Green discloses partially recording data to the optical disc at a desired position upon determining that the optical disc is not formatted, as noted above, Green fails to specifically disclose, while Shishido does disclose “partially recording data other than formatting data to the optical disc at a desired position upon determining that the optical disc is not formatted (see the discussion in column 8 lines 23-67 and the discussion of the packet writing to the minimally blanked disc).

Green does not disclose, but Shishido does disclose checking whether the optical disc is Fully Blanked or Minimally Blanked after the partially recording (column 8 lines 6-29 and

Figure 8); erasing, after the checking, data from a portion of the optical disc that may lead to a recording or read out error upon determining that the optical disc is Minimally Blanked (column 2 lines 16-28 and 49-52 and Figure 8); and recording remaining data other than formatting data at the desired address on the optical disc after the erasing step (column 2 lines 15-28 and 53-63 and the discussion in column 8 lines 23-67 regarding the packet writing to the minimally blanked disc).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Green and Shishido. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to determine how to proceed with the writing of data on the disc and to record data in a manner compatible with the Minimally Blanked disk state, erase the data recorded on the optical disc with a minimum time (Shishido column 8 line 19), and to properly record new data onto the track where the data has been pseudo erased (Shishido column 3 lines 19 and 20).

Regarding claim 6, Green does not explicitly disclose, but Shishido does disclose the checking comprises checking a recording management area to determine whether the disc is Fully Blanked or Minimally Blanked (column 8 lines 6-29).

Regarding claim 7, Green does not disclose, but Shishido does disclose data ranging from a next writable address to a predetermined block is erased in said erasing (column 2 lines 16-28 and 49-52 and Figure 8).

Regarding claim 9, Green does not explicitly disclose, but Shishido does disclose a step of recording, after the checking step, data from a next address upon determining that the optical disc is Minimally Blanked (column 2 lines 15-28 and 53-63).

Regarding claim 10, Green discloses an apparatus for recording data on a Minimally Blanked optical disc in an Incremental Recording mode, the apparatus comprising: a data eraser/recorder that, in response to a signal, partially records first data to a desired portion of the optical disc or erases data from a portion of the optical disc that may lead to a recording or read out error (column 5 lines 25-33); and a controller that determines whether the optical disc is formatted or unformatted (column 5 lines 25-33), outputs a signal to the data eraser/recorder to partially record the first data to the optical disc upon determining that the optical disc is not formatted (column 5 lines 25-33).

Green does not disclose but Shishido does disclose determining whether the optical disc is fully blanked or minimally blanked (column 8 lines 6-29 and Figure 8), wherein, after the data eraser/recorder partially records the first data to the optical disc, the controller outputs a signal to the data eraser/recorder to erase second data from a portion of the optical disc that may lead to a recording or read out error upon determining that the disc is minimally blanked (column 2 lines 16-28 and 49-52 and Figure 8), and outputs a signal to the data eraser/recorder to record a remaining portion of the first data if upon determining that the disc is fully blanked or if after the second data is erased (column 2 lines 15-28 and 53-63), the first and second data being data other than formatting data (see the discussion in column 8 lines 23-67 and the discussion of the packet writing to the minimally blanked disc).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Green and Shishido. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to determine how to proceed with the writing of data on the disc and to record data in a

manner compatible with the Minimally Blanked disk state, erase the data recorded on the optical disc with a minimum time (Shishido column 8 line 19), and to properly record new data onto the track where the data has been pseudo erased (Shishido column 3 lines 19 and 20).

Regarding claim 11, Green does not disclose, but Shishido does disclose the desired portion of the disc is designated by a write start address and the portion of the optical disc from which second data is erased is the next writable address to a predetermined block (column 9 lines 1-8 and 37-39).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the teachings of Green and have the desired portion of the disc is designated by a write start address and the portion of the optical disc from which second data is erased is the next writable address to a predetermined block, as disclosed by Shishido. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to accurately detect a new data recordable position.

7. Claims 2, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (US Patent Number 7,114,028 B1) and Shishido (US Patent Number 6,876,615 B2), as applied to claims 1, 5, and 10 above, and further in view of Lee (US Patent Number 7,106,665 B2).

Regarding claims 2 and 8, the combined teachings of Green and Shishido do not explicitly disclose, but Lee does disclose the determining further comprises outputting a recording error message upon determining that the optical disc is formatted (column 4 lines 37-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the teachings of Green and Shishido and output a recording error message upon determining that the optical disc is formatted, as disclosed by Lee. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to notify the user of the error.

Regarding claim 12, the combined teachings of Green and Shishido do not explicitly disclose, but Lee does disclose the controller checks a value designated at a Field 0 of a recording management area of the optical disc to determine whether the optical disc is formatted or unformatted (column 4 lines 37-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the teachings of Green and Shishido and check a value designated at a Field 0 of a recording management area of the optical disc to determine whether the optical disc is formatted or unformatted, as disclosed by Lee. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to notify the user of the error.

Allowable Subject Matter

8. Claim 13 is allowed.

None of the references of record, alone or in combination, suggest or fairly teach the limitations of independent claim 13 in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to disclose an apparatus for recording data on a Minimally Blanked optical disc in an Incremental Recording mode, the apparatus comprising: a data

eraser/recorder that, in response to a signal, records first data to a desired portion of the optical disc or erases data from a portion of the optical disc that may lead to a recording or read out error; and a controller that determines whether the optical disc is formatted or unformatted, outputs a signal to the data eraser/recorder to partially record the first data to the optical disc upon determining that the optical disc is not formatted, determines whether the optical disc is fully blanked or minimally blanked, wherein, after the data eraser/recorder partially records data to the optical disc, the controller outputs a signal to the data eraser/recorder to erase second data from a portion of the optical disc that may lead to a recording or read out error upon determining that the disc is minimally blanked, and outputs a signal to the data eraser/recorder to record a remaining portion of the first data if upon determining that the disc is fully blanked or if after the second data is erased , **wherein the second data is one error correction code block from a next writable address.**

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

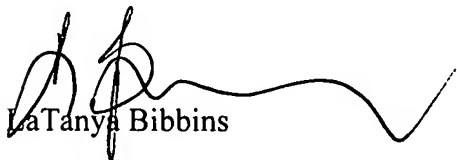
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

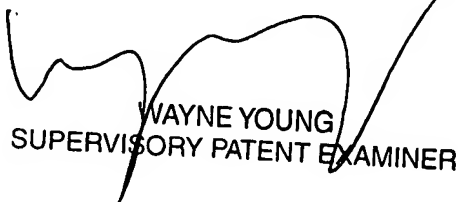
Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571) 270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LaTanya Bibbins



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER